



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/633,111

08/01/2003

Ji Zhang

8559-0001

3625

758

7590

06/24/2008

FENWICK & WEST LLP  
SILICON VALLEY CENTER  
801 CALIFORNIA STREET  
MOUNTAIN VIEW, CA 94041

EXAMINER

HUBER, JEREMIAH C

ART UNIT

PAPER NUMBER

2621

MAIL DATE

DELIVERY MODE

06/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/633,111	<b>Applicant(s)</b> ZHANG ET AL.	
	<b>Examiner</b> JEREMIAH C. HUBER	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-18, 20, 21, 38-40, 42-44 and 50-57 is/are pending in the application.
- 4a) Of the above claim(s) 52 and 56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-18, 20, 21, 28-40, 42-44, 50, 51, 53-55 and 57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Newly submitted claims 52 and 56 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The claims correspond to Group III, specifically to originally filed claims 26 and 49. The claims are directed to multiplexing and classified in class 375/240.29.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 52 and 56 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-18, 20, 21 and 38-40, 42-44, 50, 51, 53-55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (hereafter APA) in view of Rate Control for Robust Video Transmission over Burst-Error Wireless Channels (hereafter Hsu) and in further view of Lee et al (6351491).

In regard to claim 13 the APA discloses a method for transrating a compressed bitstream including:

extracting a packet payload from the compressed bitstream (Spec Fig. 2 210 and par. 11);

decoding the packet payload into at least one video frame (Spec Fig. 2 215 and par. 11);

providing the at least one video frame to an encoder output that has a quantization scale factor (Spec Fig. 2 235, 240-260 and pars. 11-12 note frame buffer provides frame data to encoder 240-260);

It is noted that the APA does not disclose a plurality of encoder outputs each with an associated quantization scale factor. However Hsu discloses a rate control method in which an encoder is provided with a plurality of outputs that each have an associated quantization scale factor (Hsu Fig. 3 and Section III particularly paragraph 2). It is therefore considered obvious that one of ordinary skill in the art at the time of the invention would recognize the advantage of including an encoding structure as taught by Hsu in the invention taught by the APA in order to select the encoder rate allocation that produces the minimum distortion at the decoder for given rate constraints as taught by Hsu (Hsu Section III paragraph 1).

It is further noted that neither that the APA nor Hsu disclose incorporating the plurality of output bitstreams into a 'video block'. However, Lee discloses a method of multiscale encoding in which a plurality of outputted data elements, quantized with a plurality of quantization scale factors, are incorporated into a 'video block' (Lee Fig. 6

and col. 5 lines 51 to 61). It is therefore considered obvious that one of ordinary skill in the art at the time of the invention would recognize the advantage of including video blocks as taught by Lee in the invention of the APA in view of Hsu in order to gain the advantage of quality scalability as suggested by Lee (Lee col. 5 lines 51 to 61).

In regard to claim 14 refer to the statements made in the rejection of claim 13 above. The APA further discloses DCT coefficients associated with a partial packed decode (Spec Fig. 2 215 and 225 and par. 11)

In regard to claim 15 refer to the statements made in the rejection of claim 13 above. The APA further discloses that the compressed bitstream is segmented into video segment processing units (Spec Fig. 2 210 and 215 and par. 11)

In regard to claims 16-18 and 20 refer to the statements made in the rejection of claim 13 above. The APA and Hsu both disclose compliance with MPEG and/or H.263 standards (Spec par. 10 and Hsu section II A) which inherently include video segment processing units such as groups of pictures, frames, slices, macroblocks, blocks. The standards further include block headers that contain a variety of information including segment offset, schedule information, and quantization parameters, which are compression statistics.

In regard to claim 21 refer to the statements made in the rejection of claim 13 above. Hsu further discloses that quantizer parameters are selected from a finite set (Hsu Section III par. 3) therefore any adjustment in quantizing parameters to reduce bit-rate will be a fixed percentage or amount as it will merely be moving from one fixed parameter to another fixed parameter.

In regard to claim 50 refer to the statements made in the rejection of claim 18 above. The APA further discloses storing at least one video frame in a frame buffer (Spec. Fig. 2 235 and par. 11).

In regard to claim 51 refer to the statements made in the rejection of claim 18 above. Lee further discloses selecting and outputting video segments that correspond to various bit rates (Lee Fig. 6 and col. 5 lines 51-61 note each layer corresponds to a different quality, also note col. 3 lines 26-37 note quality depends on quantization which determines bit rate).

In regard to claims 38-44, 53-55 and 57 refer to the statements made in the rejection of claims 13-18, 20 and 21 above.

### ***Response to Arguments***

Applicant's arguments with respect to claims 13-18, 20, 21, 38-40, and 42-44 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMIAH C. HUBER whose telephone number is (571)272-5248. The examiner can normally be reached on Mon-Fri 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeremiah C Huber  
Examiner  
Art Unit 2621

/Jeremiah C Huber/

Examiner, Art Unit 2621

/Mehrdad Dastouri/

Supervisory Patent Examiner, Art Unit 2621